INSTRUCTIONS FOR CONTINUED AIRWORTHINESS TEMPLATE

(COMPANY NAME) INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

(DRAWING/PHOTOGRAPH) (OPTIONAL)

(ROTORCRAFT MAKE AND MODEL)

REVISION: (DATE)
Revision 4 Page i

/ΜΔΝΙΙΔΙ	IDENTIFICATION
INANUAL	IDENTIFICATION

THIS PAGE INTENTIONALLY LEFT BLANK

REVISION: (PAGE NUMBER)
Revision 4 Page ii

RECORD OF REVISIONS

REVISION	ISSUE	DATE	ВҮ	REVISION	ISSUE	DATE	BY
NUMBER	DATE	INSERTED		NUMBER	DATE	INSERTED	
Original	08/04/97	09/03/97	E. R. THOMAS				
1	01/30/98	02/14/98	E. R. THOMAS				
2	06/18/98	07/02/98	E. R. THOMAS				
3	10/21/99	11/01/99	E. R. THOMAS				
4	08/04/00	08/24/00	E. R. THOMAS				

REVISION: (PAGE NUMBER)
Revision 4 Page iii

THIS PAGE INTENTIONALLY LEFT BLANK

REVISION: (PAGE NUMBER)
Revision 4 Page iv

LIST OF EFFECTIVE PAGES

LIST OF REVISIONS	Revision 0 (Original Iss Revision 1 Revision 2 Revision 3 Revision 4	Jar	nuary 30,1998 June 18,1998 tober 21,1999
LIST OF EFFECTIVE PAGES Title COVER RECORD OF REVISION LIST OF EFFECTIVE PAGES TABLE OF CONTENTS CHAPTER 1 INTRODUCTION 01-00-0 CHAPTER 4 AIRWORTHINESS LIMITA SECTION 04-00-00 CHAPTER 5 INSPECTIONS 05-00-00 CHAPTER 6 DIMENSION AND ACCESS CHAPTER 7 LIFTING AND SHORING 00 CHAPTER 8 LEVELING AND WEIGHIN CHAPTER 9 TOWING AND TAXIING 09 CHAPTER 10 PARKING AND MOORING CHAPTER 11 PLACARDS AND MARKII CHAPTER 12 SERVICING 12-00-00 CHAPTERS 20, 51, 60, 70, STANDARD CHAPTERS 21, 22, 23, 24, 25, 26, 27, 2 35, 36, 37, 45, 49, AIRFRAL 52, 53, 54, 55, 56, STRUCT 62, 63, 64, 65, 66, 67 ROTO 63, 64, 65, 66, 67 ROTO 63, 64, 65, 66, 67 ROTO 64, 65, 66, 67 ROTO 65, 66, 67 ROTO 66, 63, 64, 65, 66, 67 ROTO 67, 67, 67, 67, 67, 67, 67, 67, 67, 67,	TION S 06-00-00 7-00-00 G 08-00-00 9-00-00 G 10-00-00 NG 11-00-00 PRACTICES ()-00-00 19, 30, 31, 33, 34, ME SYSTEM ()-00-00 DRS ()-00-00	Pages i, ii BLANK iii, iv BLANK v THRU vi vii THRU x 1 THRU 8 1, 2 BLANK	Revision No. 4 4 4 4 3 2 3 2 4 4 2 3
71, 72, 73, 74, 75, 76, 77, 76 83 POWERPLANT ()-00-0		1,2 ,3, 4, 5, 6, 7, 8	3 4
Attachment 1 PART 29 REQUIREMEN Attachment 2 INSTRUCTIONS FOR CO	,	THRU 5, 6 BLAN	K 4
AIRWORTHINESS PROCE Attachment 3 ATA CHAPTER LISTING Attachment 4 TYPE DESIGN CHANGE	DURE INFORMATION	1 AND 2 1, 2 BLANK	3 3
PROCEDURE	C, TRECOMMENDED	1, THRU 9,10 BL	ANK 4

REVISION: (PAGE NUMBER)
Revision 4 Page v

LIST OF EFFECTIVE PAGES

- a. The applicant should provide a means of identifying each page of the Instructions for Continued Airworthiness (ICA) so maintenance personnel know they have a complete and current ICA. There is no requirement for a specific format; however, there is an established standard format that has been used by industry for many years. This standard is the List of Effective Pages.
- b. The applicant should list all pages, revision number, and revision date contained in the applicant's ICA on a "List of Effective Pages" page either, for the complete manual or by each chapter. If individual chapter method is used, the manual should have a master "List of Effective Pages" page containing all the chapters and revision numbers.
- c. A page means a single side of a leaf within the ICA. When no text is intended for a page the following statement should be on the blank page: THIS PAGE INTENTIONALLY LEFT BLANK. In addition, the intentionally left blank page should contain the manual identification, revision number, and page number. If a page has not been revised from the original issue, this will always be designated with revision number "O." It is standard industry practice to list "Revision O" to indicate an original issue page. The revision number will remain the same until ICA is accepted by the FAA/AUTHORTY regardless of the number of draft changes made prior to acceptance.
- d. The section that lists multiple chapters and has parentheses ()-00-00, indicates the information is applicable to any of those chapters; i.e., Chapters 21, 33, 52, 67, or 71 of the ATA chapter format. The chapter numbers are not sequential because those missing chapters are not applicable to rotorcraft.

REVISION: (PAGE NUMBER)
Revision 4 Page vi

TABLE OF CONTENTS

Identification	Title	Page
CHAPTER 1	INTRODUCTION 01-00-00	1
	1. ACCEPTABLE TO THE FAA/AUTHORITY	1
	2. MANUALS	2
	3. CONTENTS	2
	4. SCOPE	2
	5. PURPOSE	2
	6. ARRANGEMENT	2
	7. SUPERSEDED DOCUMENTS	3
	8. APPLICABILITY	3
	9. DEFINITIONS	3
	10. ABBREVIATIONS	3
	11.ACRONYMS	3
	12. SYMBOLS	4
	13. PRECAUTIONS	4
	14. UNITS OF MEASUREMENT	4
	15. ICA FOR EACH ENGINE	4
	16. ICA FOR EACH ROTOR	4
	17. ICA FOR EACH APPLIANCE REQUIRED BY THIS	
	CHAPTER	4
	18. INFORMATION ESSENTIAL TO THE CONTINUED	
	AIRWORTHINESS OF THE ROTORCRAFT	5
	19. REFERENCED PUBLICATIONS	6
	20. DISTRIBUTION	7
	21. ROTORCRAFT FEATURES	7
	22. CORRECTIONS TO ORIGINAL INSTRUCTIONS FOR	
	CONTINUED AIRWORTHINESS	8
	23. INDICATING CHANGES TO INSTRUCTIONS FOR	
	CONTINUED AIRWORTHINESS	8
CHAPTER 4	AIRWORTHINESS LIMITATIONS SECTION 04-00-00	1
	1. AIRWORTHINESS LIMITATIONS INFORMATION	1
	2. NO AIRWORTHINESS LIMITATIONS INFORMATION	
	REQUIRED.	1
CHAPTER 5	INSPECTION REQUIREMENTS AND OVERHAUL	
Orma rend	SCHEDULE 05-00-00	1
	1. INSPECTION REQUIREMENTS	1
	2. COMPONENT OVERHAUL SCHEDULE	3
	3. NO OVERHAUL REQUIRMENTS	3
	4. INSPECTION EXAMPLE	3
	I. III LOTTON LIVIUI LL	J

REVISION:	(PAGE NUMBER)
Revision 4	Page vii

TABLE OF CONTENTS (Continued)

Identification CHAPTER 6	Title DIMENSIONS AND ACCESS 06-00-00 1. AN EXPLANATION OF THE ROTORCRAFT FEATURES 2. LOCATION OF ACCESS PANELS 3. DIAGRAM OF STRUCTURAL ACCESS PLATES AND INFORMATION NEEDED TO GAIN ACCESS FOR INSPECTION WHEN ACCESS PLATES ARE NOT PROVIDED	Page 1 1 1
CHAPTER 7	LIFTING AND SHORING 07-00-00 1. LIFTING a. JACKING INFORMATION b. LIFTING INSTRUCTIONS 2. SHORING INSTRUCTIONS	1 1 1 1
CHAPTER 8	LEVELING AND WEIGHING 08-00-00 1. LEVELING INFORMATION 2. WEIGHING AND DETERMINING THE CENTER OF GRAVITY INSTRUCTIONS.	1 1
CHAPTER 9	TOWING AND TAXIING 09-00-00 1. TOW INSTRUCTIONS 2. TAXIING INSTRUCTIONS	1 1 1
CHAPTER 10	PARKING AND MOORING 10-00-00 1. MOORING INFORMATION 2. PARKING INFORMATION 3. STORAGE LIMITATIONS	1 1 1 1
CHAPTER 11	PLACARDS AND MARKINGS 11-00-00 1. PLACARD AND MARKING INFORMATION	1 1
CHAPTER 12	SERVICING 12-00-00 1. SERVICING INFORMATION 2. LUBRICATION INFORMATION 3. EQUIPMENT REQUIRED FOR SERVICING 4. CONSUMABLE MATERIALS	1 1 1 1
CHAPTERS 20,5	51,60,70 STANDARD PRACTICES ()-00-00 1. STANDARD PRACTICES 2. STANDARD PRACTICES INFORMATION	1 1 1

REVISION: (PAGE NUMBER)
Revision 4 Page viii

TABLE OF CONTENTS (Continued)

Identification Title	Page
CHAPTERS 21, 22, 23, 24, 25, 26, 27, 29, 30, 31,33, 34, 35, 36, 37, 45,	
49 AIRFRAME SYSTEMS ()-00-00 52, 53, 54, 55, 56. STRUCTURES ()-00-00	
62, 63, 64, 65, 66, 67, ROTORS ()-00-00	
71, 72, 73, 74, 75, 76, 77, 78, 79, 80, and 83 POWERPLANT ()-00-00 1
REQUIREMENTS	1
1. INTERFACE INFORMATION	1
2. DESCRIPTION OF ROTORCRAFT AND ITS SYSTEM	IS AND
INSTALLATIONS	1
3. DESCRIPTION OF ROTORCRAFT'S ENGINE(S)	1
4. DESCRIPTION OF ROTORCRAFT'S ROTOR(S)	2
5. DESCRIPTION OF ROTORCRAFT'S APPLIANCES	2
6. BASIC CONTROL AND OPERATING INFORMATION	
7. SERVICING INFORMATION	3
8. LOCATION OF ACCESS PANELS	3
9. LUBRICATION INFORMATION	3 4
10. EQUIPMENT REQUIRED FOR SERVICING 11. RECOMMENDED PERIODS	4
11. RECOMMENDED PERIODS 12. DEGREE OF THE INSPECTION	4
13. WORK RECOMMENDED	5
14. APPLICABLE WEAR TOLERANCE	5
15. TROUBLESHOOTING	5
16. ORDER AND METHOD OF REMOVAL	6
17. ORDER AND METHOD OF REPLACING	6
18. GENERAL PROCEDURAL INSTRUCTIONS - TESTIN	
19. GENERAL PROCEDURAL INSTRUCTIONS - CHECK	KING 7
20. STORAGE LIMITATIONS	7
21. SPECIAL INSPECTION TECHNIQUES	7
22. PROTECTIVE TREATMENT	7
23. STRUCTURAL FASTENERS	8
24. SPECIAL TOOLS	8
Attachment 1 PART 29 REQUIREMENTS	1
Attachment 2 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS PROCEDURE	
INFORMATION Attachment 3 ATA CHAPTER LISTINGS	1 1
Attachment 4 TYPE DESIGN CHANGE ICA RECOMMENDED PROCEDURE	1

REVISION:	(PAGE NUMBER)
Revision 4	Page ix

TABLE OF CONTENTS (Continued)

There is no requirement for a specific format for the Table of Contents. The Table of Contents may be for the complete manual, chapter, or for both. When a Table of Contents for each chapter is used, there should be a Table of Contents listing all chapters in the ICA.

REVISION: (PAGE NUMBER)
Revision 4 Page x

CHAPTER 1 INTRODUCTION

The requirements of Appendix A to Part 29 are identified in **bold type** and are contained in the Introduction Chapter of this document. These requirements should be included in the Instructions for Continued Airworthiness (ICA). Items in regular type are not required by the Federal Aviation Regulations (FAR)/Joint Airworthiness Regulation (JAR), but recommend the applicant include those items in the ICA for standardization and clarity. The underlined words and sentences are to emphasize the information. The same requirements exist for a Type Certificate (TC), Supplemental Type Certificate (STC), or other changes to the type design as specified in the Type Certificate Data Sheet accepted under a Field Approval (FA). The term Type Design Change refers to changes to the type design of the rotorcraft made under TC, STC, or FA. ICA for Type Design Change (TDC) need not include ATA chapters not affected by the modification. Appropriate text in regular type can be copied from the ICA template. Text in italics and the appendices are for instruction and are not to be copied.

This guidance is intended for applicants who are required to comply with § 29.1529, Amendment 20, to prepare an ICA acceptable to the FAA/AUTHORITY, and applicants required to prepare an ICA for a major alteration accepted under a FA. The ICA template may be used by an applicant preparing an ICA.

1. ACCEPTABLE TO THE FAA/AUTHORITY

- a. The applicant must prepare Instructions for Continued Airworthiness in accordance with Appendix A to FAR/JAR Part 29 that are acceptable to the FAA/AUTHORITY. Reference § 29.1529. As appropriate.
- b. For the applicant's proposed ICA to be <u>acceptable to the FAA/AUTHORITY</u>, it should contain:
 - (1) The applicable requirements specified in Appendix A to FAR/JAR Part 29.
 - (2) Correct terminology and/or correct references.
- (3) A Cover Page that will readily identify the publication as the applicant's ICA for that make and model rotorcraft.
- (4) A revision control procedure and Record of Revisions that will show currency of the ICA.
- (5) A means of identifying each page of the publication and a List of Effective Pages that lists each page and its revision number.
- (6) A Table of Contents indicating the subject and location and providing ease of use for maintenance personnel.
- c. <u>FAA/AUTHORITY cannot make a determination of acceptability of the ICA without a complete ICA and all publications referenced in the applicant's ICA.</u> <u>ICA review will be discontinued when it is determined:</u>
 - (1) The ICA is not complete.
 - (2) That all referenced publications were not submitted with the ICA.

CHAPTER 1 INTRODUCTION (Continued)

- (3) The applicant did not audit the ICA to ensure it met the requirements specified in Appendix A of FAR/JAR Part 29 and this ICA template.
- d. <u>No determination of correct spelling, proper grammar, or accuracy of the information will be made by the FAA/AUTHORITY</u>
- e. FAA/AUTHORITY reviews and determines the acceptability of ICA. This ICA template contains the requirements specified in Appendix A to FAR/JAR Part 29 and other items which are not specifically required by the FAR/JAR, but are needed to ensure that maintenance personnel have complete, correct, and current ICA.
- f. Acceptance of the ICA is indicated by a signed and dated acceptance statement on the List of Effective Pages.
- 2. MANUALS. The ICA must be in the form of a manual or manuals as appropriate for the quantity of data to be provided. <u>Reference Appendix A, A29.2 (a).</u>
- 3. CONTENT. The contents of the ICA must be prepared in the English language and must contain all items specified in Appendix A of Parts 29. Reference Appendix A, A29.3.
- 4. SCOPE.
 - a. Describe the scope of the ICA.
- b. The scope normally includes the necessary information to carry out maintenance on the applicable rotorcraft or modification to a rotorcraft.
- 5. PURPOSE. Describe the purpose of the ICA.

6. ARRANGEMENT.

- a. The applicant must provide a practical arrangement in the manual. <u>Reference Appendix A, A29.2 (b).</u>
- b. The Introduction of the ICA should explain the manual arrangement and how to use it. There is no requirement for any specific format or arrangement of the manual or manuals.
- c. For standardization, we recommend using the ATA-100 numbering system and the format and content of this ICA template.

CHAPTER 1 INTRODUCTION (Continued)

- d. The manual should not be in a mixed arrangement, i.e., a mixture of written text on both sides of a page and written text on one side of a page. The preferred method is written text on both sides of a page.
 - e. When there is no written text for a page, the page should contain the following statement: THIS PAGE INTENTIONALLY LEFT BLANK

The page should be identified in the same manner as the rest of the pages in the manual and the page listed in the List of Effective Pages.

- 7. SUPERSEDED DOCUMENTS. For TDCs, the ICA should contain the following statement: Superseded Documents: The information, procedures, requirements, and limitations contained in this Instructions for Continued Airworthiness for this type design change supersede the information, procedures, requirements and limitations contained in the rotorcraft's maintenance manual when the type design change is installed on the Type Certificate Holder's rotorcraft.
- 8. APPLICABILITY. The ICA should include the make, model, and serial number (if applicable) of rotorcraft to which the ICA apply.
- 9. DEFINITIONS. Some words or terms used in the ICA require defining in the Introduction. AUTHORITY means another airworthiness authority that has adopted this ICA.
- 10. ABBREVIATIONS. Abbreviations used in the ICA should be listed with their words/terms in the Introduction of the ICA.
 - a. FAA/AUTHORITY = Federal Aviation Administration or another airworthiness authority
 - b. FAR = Federal Aviation Regulation
 - c. ICA = Instructions for Continued Airworthiness
 - d. JAR = Joint Airworthiness Regulations
 - e. LOAP = List of Applicable Publications
 - f. TDC = Type Design Changes
- 11. ACRONYMS. Acronyms used in the ICA should be listed with their terms in the Introduction of the ICA.

CHAPTER 1 INTRODUCTION (continued)

- 12. SYMBOLS. Symbols used in the ICA should be listed with explanations in the Introduction of the ICA.
- **13. PRECAUTIONS.** Precaution means a measure taken beforehand to prevent harm.

a. Any necessary precautions to be taken must be included in the ICA. <u>Reference Appendix A, A29.3 (b)(3).</u>

- b. The following precautions will differ due to the seriousness of the hazard or condition:
- (1) **WARNING:** Could be a maintenance procedure, practice, condition, etc., that could result in personal injury or loss of life.
- (2) **CAUTION:** Could be a maintenance procedure, practice, condition, etc., that could result in damage or destruction of equipment.
- (3) **NOTE**: Could be a maintenance procedure, practice, condition, etc., or a statement which needs to be highlighted.

14. UNITS OF MEASUREMENT

- a. The ICA contains units of measurements. These measurements could be instrument readings, temperatures, pressures, tolerances, limits, or torque values.
- b. It is recommended the ICA contains both United States standard measurements and Metric measurement, for each measurement, tolerance, or torque value. A general conversion chart is not acceptable.

15. ICA FOR EACH ENGINE

- a. The ICA must include ICA for each engine. Reference Appendix A, A29.1 (b).
- b. ICA for type certificated engines are accepted by the FAA/AUTHORITY responsible for engines and could be included by reference in the applicant's ICA.
- c. ICA for non-type certificated engines are prepared by the applicant and submitted to appropriate FAA/AUTHORITY for review and evaluation.

16. ICA FOR EACH ROTOR

- a. The ICA must include ICA for each rotor. Reference Appendix A, A29.1 (b).
- b. ICA for rotors is normally included in the rotorcraft ICA.

17. ICA FOR EACH APPLIANCE REQUIRED BY THIS CHAPTER

a. The ICA must include ICA for each appliance required by FAR/JAR. Reference Appendix A, A29.1 (b).

CHAPTER 1 INTRODUCTION (continued)

- b. FAA/AUTHORITY-accepted ICA for an appliance could be included by reference in the applicant's ICA.
- c. When an appliance is required to be installed by a TDC, the appliance is required by FAR/JAR and the applicant must prepare ICA that is acceptable to the FAA/ AUTHORITY.
- d. The FAA/AUTHORITY-accepted appliance ICA normally does not address interface information. The applicant should prepare information on how that appliance interfaces with the rotorcraft. Interface information should include appliance location, appliance attachment, if applicable, the system(s) from which the appliance receives it electrical power, fluid (fuel, oil, hydraulic, etc.), vacuum, pneumatic, etc., and how the appliance is controlled.
- e. When the ICA for an appliance is not FAA/AUTHORITY accepted, the applicant should prepare the ICA for that appliance which meets the requirements specified in Appendix A to FAR/JAR Part 29. The ICA for each appliance could be a stand-alone document or could be included in the applicant's ICA document for that TDC.
- f. When an original appliance is replaced with a different appliance as part of the TDC, the applicant should prepare the ICA for that appliance which meets the requirements specified in Appendix A to FAR/JAR Part 29. A different appliance is one that has a different part number, model number, or is made by the same manufacturer or different manufacturer.
- g. As defined in FAR/JAR Part 1, <u>Appliance</u> means any instrument, mechanism, equipment, part, apparatus, appurtenance, or accessory, including communications equipment, that is used or intended to be used in operating or controlling an aircraft in flight, is installed in or attached to the aircraft, and is not part of an airframe, engine, or propeller. Avionics equipment is an appliance.

NOTE: Some applicants may wish to include Amendment 20 to FAR/JAR Part 29 in the certification basis for their TDC and prepare the ICA for their TDC even though the certification basis for the rotorcraft does not require acceptance of the ICA by the FAA/AUTHORITY. These applicants will be required to obtain FAA/AUTHORITY acceptance for their ICA.

18. INFORMATION ESSENTIAL TO THE CONTINUED AIRWORTHINESS OF THE ROTORCRAFT

a. If ICA are not supplied by the manufacturer of an appliance or product (engine or rotor), the ICA must include the information essential to the continued airworthiness of the rotorcraft. Reference Appendix A, A29.3 (b)(3).

CHAPTER 1 INTRODUCTION (continued)

- b. The applicant should include in their ICA the information necessary to service, maintain, and inspect the rotorcraft, its engines, rotors, and appliances, in an airworthy condition and ensure they meet type design. Appendix A to FAR/JAR Part 29 specifies minimum requirements. The applicant determines the information essential to the continued airworthiness.
- c. The information essential to the continued airworthiness of the rotorcraft its engines, rotors, and appliances could be contained in the applicant's ICA, engine ICA, appliance ICA, or other applicant-associated publications, i.e., overhaul manuals, illustrated parts catalog, or flight manual. Those ICAs and associated publications that are listed in the applicant's <u>List of Applicable Publications (LOAP)</u> constitute the required information essential for continued airworthiness for that rotorcraft, its engines, rotors, and appliances or that TDC. The LOAP is contained in the Introduction section of the applicant's ICA. The LOAP should contain one of the following statements: "The publications listed in the LOAP constitute the required information essential for continued airworthiness for the TDC."

19. REFERENCED INFORMATION

- a. Appendix A to FAR/JAR Part 29 allows an applicant to refer to an <u>accessory</u>, <u>instrument</u>, or <u>equipment</u> manufacturer as the source of this information <u>if the applicant shows that the item has an exceptional high degree of complexity requiring specialized maintenance techniques, test equipment, or expertise.</u>
- b. When the applicant has shown that the accessory, instrument, or equipment meets the requirements of 19a above, the manufacturer's information could be referred to as the source of the information. The information refers to those specified in Appendix A, Section A29.3, Contents, Paragraph (b)(1). The applicant has responsibility for securing authorization to use that information in their ICA.
- c. The information is limited to scheduling for each of the accessories, instruments, and equipment providing the recommended periods at which they should be cleaned, inspected, adjusted, tested, and lubricated. In addition, they could be the source of information for the degree of inspection, applicable wear tolerances, and work recommended at these periods.
- d. The FAR/JAR allows an applicant to refer to Engine ICA and Appliance ICA, which are FAA/AUTHORITY-accepted, and the applicant's associated publications in the applicant's ICA. See Introduction Section, Paragraph's 15, 16, and 17.
- e. Any ICA or associated publications referenced in the applicant's ICA should be submitted with the applicant's ICA.

CHAPTER 1 INTRODUCTION (Continued)

20. DISTRIBUTION

- a. The ICA must include a program to show:
 - (1) Distribution of changes to the ICA made by the applicant.
- (2) Distribution of changes to the ICA made by the manufacturer of the engine or engines, rotor or rotors, and appliances installed on the rotorcraft. Reference Appendix A, A29.1 (c).
- b. The introduction of the applicant's ICA should contain the procedure used to distribute changes to persons who maintain the rotorcraft or who have incorporated the TDC.
- c. When the applicant has referenced FAA/AUTHORITY accepted publications in their ICA, the procedure used to ensure changes to those referenced publications are distributed to persons who maintain the rotorcraft or who have incorporated the TDC. The procedures should be explained in the introduction of the applicant's ICA.
- d. ICA normally includes a procedure for making changes to the applicant's ICA. The introduction should include a description of the revision procedure. The procedure should contain information on the type of revisions, composition of the revision, revision control procedure, revision log page, updating procedure, and procedure for purchase of revisions and renewal of subscription.

21. ROTORCRAFT FEATURES

- a. The ICA must include introduction information that includes:
 - (1) An explanation of the rotorcraft's features; and,
- (2) Data to the extent necessary for maintenance and preventive maintenance. Reference Appendix A, A29.3 (a)(1).
 - b. The ICA normally contain a description which includes:
 - (1) The explanation of the rotorcraft's features:
 - (a) General information about the rotorcraft features.
 - (b) Exterior features.
 - (c) Interior features including cockpit, and cabin.
 - (d) Other features.
 - c. A figure showing the features is helpful and does not require detailed explanation.
- d. The data necessary for maintenance and preventive maintenance is normally described in the applicable chapter and is determined by the applicant.

CHAPTER 1 INTRODUCTION (Continued)

- 22. CORRECTIONS TO ORIGINAL INSTRUCTIONS FOR CONTINUED AIRWORTHINESS.
- a. <u>Any correction made to Draft Instructions for Continued Airworthiness prior to FAA/AUTHORITY acceptance should have the same revision number and date as the draft page originally submitted.</u>
- b. Changes or corrections made to ICA after FAA/AUTHORITY acceptance of ICA are considered to be a revision.
- 23. INDICATING CHANGES TO INSTRUCTIONS FOR CONTINUED AIRWORTHINESS.

The applicant could use any means to indicate changes to their ICA. The following is an example used in the ICA template.

- a. Any change to the ICA should be indicated as follows:
- (1) Changes made to a line should be indicated by a vertical bar in the left margin next to the line.
- (2) Changes made to a paragraph should be indicated by a vertical bar in the left margin next to the paragraph letter or number.
- (3) Changes made to a complete page should be indicated by a vertical bar to the right of the page number.
- b. Only revisions should contain change bars. Change bars are used to indicate changes for that revision. Previous change bars should be removed at the next revision.

CHAPTER 4 AIRWORTHINESS LIMITATION SECTION

1. AIRWORTHINESS LIMITATIONS INFORMATION

- a. The ICA must have in the principal manual a section titled "Airworthiness Limitations." This section should be segregated and clearly distinguishable from the rest of the maintenance manual and contain:
 - (1) Each mandatory replacement time.
- (2) Each structural inspection interval and related structural inspection procedure approved under §§ 29.571.
- (3) A legible statement in a prominent location indicating that the Airworthiness Limitations section is FAA/AUTHORITY approved and specifies required maintenance and/or inspections. The exact, required wording of this statement is found in the FAR/JAR. Reference Appendix A, A29.4
- b. The Airworthiness Limitations Section will be evaluated and approved by FAA/AUTHORITY.
- 2. NO AIRWORTHINESS LIMITATIONS INFORMATION REQUIRED:

When the applicant's TDC has no airworthiness limitations, the Airworthiness Limitations Section of the ICA should contain the following statement:

"No airworthiness limitations associated with this type design change."

THIS PAGE INTENTIONALLY LEFT BLANK

CHAPTER 5 INSPECTION REQUIREMENTS AND OVERHAUL SCHEDULE

1. INSPECTION REQUIREMENTS -

- a. The ICA must include:
- (1) The recommended period at which each part of the rotorcraft and its engine(s), auxiliary power unit, rotor(s), accessories, instruments and equipment shall be inspected. Reference Appendix A, A29.3 (b)(1).
- (2) The degree (scope) of the inspection for each part of the rotorcraft and its engine(s), auxiliary power unit, rotor(s), accessories, instruments and equipment. Reference Appendix A, A29.3 (b)(1).
- (3) An inspection program that includes the frequency and extent of the inspection necessary to provide for the continued airworthiness of the rotorcraft. Reference Appendix A, A29.3 (b)(1).
- b. This chapter should contain a schedule of the interval for all inspections. The inspection intervals may be in hours and/or calendar time.
- c. In the introduction of this chapter, it should explain all required inspections and should include:
 - (1) The different type of inspections.
 - (a) Scheduled inspections.
 - (b) Special inspections.
 - (c) Conditional inspections.
 - (2) An explanation of each inspection.
 - (3) A list of all inspections (daily, 300-hour, 600-hour, annual, special inspection, etc.).
- d. This chapter should contain the scope of the inspection(s). It should also describe the intent of the inspection and should address at least the following:
 - (1) What the inspector should be looking for when inspecting the product or appliance (cracks, corrosion, delamination, dents, bends, wear, etc.).
 - (2) Location of the product or appliance to be inspected.
 - (3) Any special techniques required to inspect the product or appliance.
 - (4) Instructions to be followed when inspecting the product or appliance.
 - (5) Any tools or equipment required to accomplish the inspection of the product or appliance.
 - (6) The wear tolerances for a product or appliance when the inspection requires the product or appliance to meet a standard.
 - e. This chapter should contain an inspection program which contains an outline of the order of the inspections and instructions to be followed during the inspection and should include:
 - (1) General information such as:
 - (a) The title of the inspection.

CHAPTER 5 INSPECTION REQUIREMENTS AND OVERHAUL SCHEDULE (continued)

- (b) Aircraft information (registration number, serial number, total time in service).
- (c) General information about the inspection.
- (d) Provide a block for the inspector or maintenance personnel to initial when each item has been inspected or action taken.
- (e) Provide a signature line for the inspector and maintenance personnel to sign when the inspection has been accomplished.
- (f) Provide a place to enter the date the inspection was completed.
- (2) Pre-inspection activities such as:
 - (a) Maintenance records review.
 - (b) Airworthiness Directive review.
 - (c) Overhaul and life limits requirements review.
- (3) Maintenance practices are associated with an inspection such as:
 - (a) Removal of cowling, panels, plates, and covers to access items being inspected.
 - (b) Cleaning of the item to be inspected. Specify type and number of cleaning material.
 - (c) Specify tools and/or equipment required for the particular inspection, i.e., torque wrench, hydraulic unit, etc.
- (4) The inspection should include:
 - (a) Locate the item(s) to be inspected.
 - (b) Identify what the inspector should be inspecting (security, wear, damage, corrosion, etc.).
 - (c) Instructions specified for that inspection.
 - (d) Using the required inspection techniques.
 - (e) Using tools and equipment specified for that inspection.
 - (f) Determine that the item(s) being inspected meet the airworthiness standard established for that product or appliance.
 - (g) Recording of inspection findings.
 - # NOTE: Most of the above information is normally contained in an inspection form which inspection personnel could copy and use.
- (5) Type of action to be taken when inspected item is unsatisfactory.
- (6 Post inspection actions such as:
 - (a) Application of protective coatings removed for inspection.
 - (b) Servicing and lubrication requirements.
 - (c) Installation of cowling, panels, plates, and covers removed for inspection.
 - (d) Post inspection run up and system operation.
 - (e) Maintenance record entry.

CHAPTER 5 INSPECTION REQUIREMENTS AND OVERHAUL SCHEDULE (continued)

- f. If applicable this chapter should include any special inspection techniques such as:
 - (1) Radiographic.
 - (2) Ultrasonic.
- g. Inspection interval extension statement in the ICA is not acceptable to the FAA. For those airworthiness authorities that allow extensions, the following statement should be included in this chapter:

"Inspection interval extension may be used if approved by the airworthiness authority."

2. COMPONENT OVERHAUL SCHEDULE

- a. The ICA must include:
 - (1) The recommended overhaul periods.
- (2) Necessary cross-references to the Airworthiness Limitations Section. Reference Appendix A, A29.3 (b)(1).
 - b. The Component Overhaul Schedule normally includes:
 - (1) Component's part number.
 - (2) Component's nomenclature.
 - (3) Time Between Overhaul Interval in hours or calendar time.
 - c. Notes may be used to provide information about the requirements.

3. NO OVERHAUL REQUIREMENTS

a. When there are no overhaul requirements, the following statement should be included in Chapter 5 of the ICA.

"No component overhaul required for this type design change."

4. INSPECTION EXAMPLE

a. To assist in preparing an inspection program, an Inspection Example is provided on the next page. We recommend making the Inspection Example an appendix and last page of the ICA, so maintenance personnel can copy the Inspection Program, add the STC inspection to the rotorcraft's inspections, and use it to inspect the appliance.

INSPECTION EXAMPLE:	100-Hour Inspection	ENTIL TOATTON
	Aircraft Hours Total Time	
Initial each item after accomplishing		
Record all findings and attach a cop After correction of all findings, make		
	INITIAL EACH ITEM AFTER ACCOMPLISHMENT	INITIAL
1. Describe pre-inspection actions	Turring Maintananas Dagarda	
Example 1. Review Rotorcraft and Example 2. Review Airworthiness D		
Example 2. Review All Worldliness D	offectives.	
MAINTENANCE PRACTICES	INITIAL EACH ITEM AFTER ACCOMPLISHMENT	INITIAL
1. Describe access panel to be re	emoved and door to be opened.	
Example 1. Remove access panel F	P3, P4, P5, P6, P7, P8, D1, D5, D10, D15 etc.	
2. Describe maintenance action re	equired to accomplish the inspection.	
Example 1. Clean (appliance) using	g Arro ACR-223 solvent.	
Example 2. Lubricate (appliance) i		
3. Describe special tool and equip		
Example 1. Place jacks under helic		
Example 2. Use a 10-power magnif	ying glass and bright light required for inspection.	
INSPECTION	INITIAL EACH ITEM AFTER ACCOMPLISHMENT	INITIAL
Provide any special instruction	ted, its location, and what the item is being inspected for. s or technique to be used, identify special tool required, and adard that the item should meet.	
Inspect (appliand	ce) for cleanliness, corrosion and security.	
	ce) for scratches, dent, delamination and cracks. Cracks up epaired. Appliance with cracks longer than .040 part should	
Example 3. (Appliance)		
Inspect (appliance) for due dates ar	nd expiration.	
Example 4. (Appliance)	·	
	ce) for security, lack of lubrication, and freedom of wear. Acceptable wear is .003 to .005.	
Example 5. (Appliance)		
to 22-inch lbs. ar	ce) attachment nuts for correct torque. Set torque wrench and torque nut. If nut moves, replace (appliance).	
Example 6. (Appliance) Inspect (Appliance)	ce) for correct operations, etc.	
POST INSPECTION IN	NITIAL EACH ITEM AFTER ACCOMPLISHMENT	INITIAL
	ective coating, servicing or lubrication appliances,	
	nd doors, run up and system operations.	
	e practices for the inspection, i.e., install access panels and	
close doors opened for the inspection		
	em operation and verify correct function and operation.	
Example 3. Complete and sign airc	craft's maintenance record entry	
Mechanic Name		
Inspector Name		
REVISION:	(F	PAGE NUMBER
Revision 4	•	5-00-00 Page 4

CHAPTER 6 DIMENSIONS AND ACCESS

1. AN EXPLANATION OF THE ROTORCRAFT FEATURES

- a. The ICA must include the features of the rotorcraft. Reference Appendix A, A29.3 (a)(1).
 - b. The dimensions are part of the rotorcraft's features and normally include:
 - (1) Principal dimensions of the rotorcraft.
 - (2) Dimensions of the rotorcraft.
 - (a) Exterior dimensions.
 - (b) Interior dimensions.
 - (3) Layout of the rotorcraft.
 - (4) Divisions of the structure zones and zonal groups.
 - (5) Airframe reference lines.
 - (a) Stations lines.
 - (b) Water Lines.
 - (c) Buttocks Lines.

2. LOCATION OF ACCESS PANELS

- a. The ICA must include the location of access panels for inspection and servicing. Reference Appendix A, A29.3 (a)(4).
 - b. Access information normally includes:
 - (1) Description of access panel, plates, doors, and cowlings.
 - (2) Location of access panels plates, doors, and cowlings.
 - (3) Procedure for removing and installing access panels and doors.
 - (4) Figures showing dimensions and locations of access panels and doors.
- c. To prevent removal of all access panels, plates, doors, and cowling for each inspection, the access panels, plates, doors, and cowling should be identified. Only those identified would need to be removed for each inspection. The use of a figure to identify those access panels, plates, doors, and cowling is recommended.
- 3. DIAGRAM OF STRUCTURAL ACCESS PLATES AND INFORMATION NEEDED TO GAIN ACCESS FOR INSPECTION WHEN ACCESS PLATES ARE NOT PROVIDED.
- a. The ICA must include structural access plate information. Reference Appendix A, A29.3 (c).
 - b. If applicable, the ICA should identify those structural access plates.

THIS PAGE INTENTIONALLY LEFT BLANK

CHAPTER 7 LIFTING AND SHORING

1. LIFTING. The ICA must include instructions including procedures for lifting. Lifting instructions are divided in two areas - jacking information and lifting instructions. <u>Reference Appendix A, A29.3 (b)(4).</u>

a. JACKING INFORMATION

- (1) The ICA must include information for jacking.
- (2) Jacking information normally includes:
 - (a) A description of the jacking system.
 - (b) Location of jack pads.
 - (c) Procedure for installing and removing jack pads.
 - (d) Procedure for installation and removal special fixtures.
 - (e) Specify special tools and equipment required for jacking.
 - (f) The minimum capacity of the jacks required.
- (g) Procedure for jacking includes: action to be accomplished before jacking, the order and method of jacking helicopter, and actions to be accomplished after jacking.
 - (h) Precautions to be taken.

b. LIFTING INSTRUCTIONS

- (1) The ICA must include instructions for lifting.
- (2) Lifting instructions normally include:
 - (a) A description of the lifting system.
 - (b) Location of hoist attachments.
 - (c) Procedure for installing and removing lifting tools and equipment.
 - (d) Special tools and equipment required for lifting.
 - (e) The minimum capacity of the lifting equipment.
- (f) Procedure for lifting includes: actions to be accomplished before lifting, the order and method of lifting the helicopter, and actions to be accomplished after lifting.
 - (g) Precautions to be taken.

2. SHORING INSTRUCTIONS

- a. The ICA must include instructions including procedures for shoring. <u>Reference Appendix A, A29.3 (b)(4)</u>.
 - b. Shoring instructions normally include:
 - (1) A description of the task to be accomplished prior to shoring the rotorcraft.
 - (2) A description of the order and method of shoring the rotorcraft.
 - (3) Special procedures to be used during shoring of the rotorcraft.
 - (4) Specify precautions to be used during shoring of the rotorcraft.
 - (5) Specify tool(s), special tool(s), or equipment required for shoring.

THIS PAGE INTENTIONALLY LEFT BLANK

REVISION:
Revision 2

CHAPTER 8 LEVELING AND WEIGHING

1. LEVELING INFORMATION

- a. The ICA must include leveling information. Reference Appendix A, A29.3 (a)(4).
- b. Leveling information normally includes:
 - (1) A description of the leveling system.
 - (2) Location(s) of the leveling points.
 - (3) Procedure for installation and removal of special fixtures required for leveling.
 - (4) Description of the fixtures and their location.
 - (5) Special tools and equipment required for leveling.
- (6) Procedure for leveling including: actions required before leveling; the order and method of leveling the helicopter; and actions required after leveling.
 - (7) Any precaution to be taken.

2. WEIGHING AND DETERMINING THE CENTER OF GRAVITY INSTRUCTIONS

- a. The ICA must include weighing and determining center of gravity instructions. <u>Reference Appendix A, A29.3 (a)(4).</u>
 - b. Weighing and determining the center of gravity instructions should include:
 - (1) A description of the weighing system.
 - (2) Location(s) of the weighing points.
 - (3) Special tools or equipment required for weighing.
- (4) Procedure for weighing includes actions to be taken before weighing, the order and method of weighing the helicopter, and actions to be taken after weighing.
 - (5) Procedure for determining the basic weight and center of gravity.
 - (6) Samples of weighing forms.
 - (7) Any precautions to be taken.
- c. When a TDC is made and the weight and balance procedure in the rotorcraft maintenance manual will not change, the applicant need only provide for each product or appliance the weight and location (arm).
 - d. The use of a table is recommended.

THIS PAGE INTENTIONALLY LEFT BLANK

REVISION: Revision 3

(**PAGE NUMBER**) 08-00-00 Page 2

CHAPTER 9 TOWING AND TAXIING

1. TOW INSTRUCTIONS

- a. The ICA must include tow instructions and limitations. Reference Appendix A, A29.3 (a)(4).
- b. Tow instructions normally include:
 - (1) A description of the landing gear (skids type or wheel type).
 - (2) A description of the towing devices.
- (3) Procedures for installation and removal of ground handling wheels and towing devices.
 - (4) Procedures for towing and maneuvering.
 - (5) Towing limitations, including speed, turning radius, and clearance requirements.
 - (6) Precautions to be taken while towing.

2. TAXIING INSTRUCTIONS

- a. The ICA must include basic control and operating information. Reference Appendix A, A29.3 (a)(3).
- b. Taxiing instructions normally include:
 - (1) A description of the controls required to taxi the rotorcraft.
 - (2) A procedure for starting and taxiing the rotorcraft.
 - (3) Taxi limitation speed turning radius and clearance requirements.
 - (4) Precautions to be taken.

(M	ΔΝΙ	ΙΔΙ	IDEN	TIFIC	$2\Delta T$	ON
(<i>IVI)</i>	4/VC	$\mathcal{I} \mathcal{A} \mathcal{L}$	IULIN	111 IN	7M I I	

THIS PAGE INTENTIONALLY LEFT BLANK

CHAPTER 10 PARKING AND MOORING

1. MOORING INFORMATION

- a. The ICA must include mooring information. Reference Appendix A, A29.3 (a)(4).
- b. Mooring information normally includes:
 - (1) A description of mooring points and fittings.
 - (2) Location of mooring points and fittings.
 - (3) Procedures for removing and installing fairings.
 - (4) Procedures for installing and removing mooring fittings.
 - (5) Procedures for mooring rotorcraft in standard and rough weather.
 - (6) Procedures for mooring rotorcraft on land or on a ship.
 - (7) Limitations associated with mooring.
 - (8) Precautions to be taken while mooring the rotorcraft.
- c. Figures may be used to describe mooring points, fitting locations, and limitations.

2. PARKING INFORMATION

- a. The FAR/JAR do not require parking information. It is recommended that parking information be included.
 - b. Parking information normally includes:
 - (1) A description of the controls required to park the rotorcraft.
 - (2) A procedure for parking the rotorcraft.
 - (3) Equipment required for parking.
 - (4) Parking limitation: slope and clearance requirements.
 - (5) Precautions to be taken during parking.

3. STORAGE LIMITATIONS

- a. The ICA must include storage limitations. Reference Appendix A, A29.3 (b)(4).
- b. Only storage limitations are required, but storage information normally includes:
 - (1) Type of storage: short term, long term.
 - (2) Storage environments: desert, salt air, cold weather, etc.
 - (3) Identification of parts and system which should be preserved during storage.
 - (4) A description of order and method of preparing the rotorcraft for storage.
 - (5) Storage limitations.
 - (6) Procedures for installing and removing covers.
 - (7) Procedures for interim maintenance or inspection task of the rotorcraft during storage.
 - (8) Procedures for preparing the rotorcraft for operations after storage.
 - (9) Precautions to be taken while storing the rotorcraft.

THIS PAGE INTENTIONALLY LEFT BLANK

CHAPTER 11 PLACARDS AND MARKINGS

1. PLACARD AND MARKING INFORMATION

- a. Although there is no requirement for placards or markings to be in the ICA, placards and markings for the rotorcraft are part of the type design of the rotorcraft and are contained in type design drawing.
 - b. The placards and markings information normally include:
 - (1) General information about placards and markings.
 - (2) Index of exterior placards and markings.
 - (3) Index of interior placards and markings.
 - (4) Location of placards and markings.
 - (5) A procedure for installing and removing placards and markings.
 - (6) Figures may be used to show placards and markings, and their location.
- c. Maintenance personnel are required to ensure the rotorcraft meets its type design. To accomplish this, maintenance personnel need to know what placard and markings are required to be on the rotorcraft; therefore, the information on placards and markings should be in the ICA.

THIS PAGE INTENTIONALLY LEFT BLANK

CHAPTER 12 SERVICING

1. SERVICING INFORMATION

a. The ICA must include servicing information. Reference Appendix A, A29.3 (a)(4).

b. Servicing Information

- (1) Servicing information covers details regarding servicing points, capacities of tanks and reservoirs, types of fluids to be used, and pressures applicable to the various systems.
 - (2) Servicing information normally includes:
- (a) Information applying to fuel system and to other systems if ICA describes other tanks. If the tank capacity is not on the tank, the location of the information should be provided.
- (b) The type of fluid, specification, and name of fluid identification number. Figures and tables may be used for fluid identification.

2. LUBRICATION INFORMATION

- a. Lubrication information covers details regarding locations of lubrication points and the type of lubricants to be used.
- b. Lubrication information normally includes the type of lubricant, specification, name of lubricant, identification number, and precautions to be taken. Figures and tables may be used to identify lubricants.

3. EQUIPMENT REQUIRED FOR SERVICING

- a. The ICA must include the equipment required for servicing.
- b. Service information normally includes information on the equipment required for servicing, lubricating, draining, and pressurizing the applicable systems installed in the rotorcraft. These systems could include fuel system, engine oil system, gearbox oil system, hydraulic system, landing gear system, battery, rotor system, rotor drive, tires, etc. This equipment should be included in the List of Special Tools.

4. CONSUMABLE MATERIALS

The ICA must include the types of fluids to be used, types of lubricant to be used, and any storage limitations.

REVISION: (PAGE NUMBER)
Revision 2 12-00-00 Page 1

(ΜΔΝΙΙΔΙ	IDENTIFICATION
UNIAIYUAL	

THIS PAGE INTENTIONALLY LEFT BLANK

REVISION: (PAGE NUMBER)
Revision 2 12-00-00 Page 2

CHAPTERS 20, 51, 60, 70 STANDARD PRACTICES

- 1. STANDARD PRACTICES:
 - a. Chapters containing standard practices are:

Chapter 20, Airframe Standard Practices 20-00-00

Chapter 51, Structures Standard Practices 51-00-00

Chapter 60, Rotor Standard Practices 60-00-00

Chapter 70, Powerplant Standard Practices 70-00-00

- b. There are no specific requirements for a Standard Practices Chapter.
- 2. STANDARD PRACTICES INFORMATION. Standard practices information normally includes the following:
 - a. General maintenance procedure.
 - b. Information on standard hardware.
 - c. Tightening procedure.
 - d. Torque value and torquing Procedures.
 - e. Use of torque wrench.
 - f. Safety methods.
 - g. Other subjects.

THIS PAGE INTENTIONALLY LEFT BLANK

REVISION: Revision 3

(PAGE NUMBER) ()-00-00 Page 2

CHAPTERS

21, 22, 23, 24, 25, 26, 27, 29, 30, 31, 32, 33, 34, 35, 36, 37, 45, 49; Airframe Systems ()-00-00 52, 53, 54, 55, 56, Structures ()-00-00 62, 63, 64, 65, 66, 67; Rotors ()-00-00 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, and 83. Powerplant ()-00-00

REQUIREMENTS

The applicant must review requirements for each chapter, determine items that are applicable, and prepare appropriate ICA.

1. INTERFACE INFORMATION

Any required information relating to the interface of appliances, engine or engines, rotor or rotors with the rotorcraft. Reference Appendix A, A29.1 (b). This is required when appliances, engine or engines, and rotor or rotors are mounted, attached, or connected to rotorcraft. Applicant should provide information relating to the installation. Interface information should include the system(s) from which it receives electrical power, fluids (fuel, oil, hydraulic, etc.), indications, and the controls that interface with rotorcraft.

2. DESCRIPTION OF ROTORCRAFT AND ITS SYSTEMS AND INSTALLATIONS

A description of the rotorcraft and its systems and installations.

Reference Appendix A, A29.3 (a)(2). This is always required as applicable.

- a. The description of the rotorcraft should include the type of rotorcraft (passenger, cargo), type of structure (metal, composite), number of rotors, number of engines, and type of landing gear (retractable or skids)
- b. The description of the rotorcraft's systems should include the component or parts of the system and how systems interface with the rotorcraft or other systems.
- c. The description of the installations should include the location of the installation, and how the system is installed.

3. DESCRIPTION OF ROTORCRAFT'S ENGINE(S)

A description of the rotorcraft's engine(s) and its systems and installations. <u>Reference Appendix A, A29.3 (a)(2).</u> This is always required as applicable.

a. The description of the engine should include the type (piston or turbine), the manufacturer, engine model, horsepower, etc.

REVISION: (PAGE NUMBER)
Revision 3 ()-00-00 Page 1

- b. The description of the engine's systems should include the component or parts of the system and how systems interface with the rotorcraft or other systems.
- c. The description of the engine installations should include the location of the installation and how the system is installed.

4. DESCRIPTION OF ROTORCRAFT'S ROTOR(S)

A description of the rotorcraft's rotor(s) and its systems and installations. <u>Reference Appendix A, A29.3 (a)(2).</u> This is always required as applicable.

- a. The description of the rotors should include the type (two blade or more), structural (metal or composite), the rotor manufacturer, rotor model, dimensions, etc.
- b. The description of the rotor systems should include the component or parts of the system and how systems interface with the rotorcraft or other systems.
- c. The description of the rotor installations should include the location of the installation and how the system is installed.

5. DESCRIPTION OF ROTORCRAFT'S APPLIANCES

A description of the rotorcraft's appliances and its systems and installations. <u>Reference Appendix A, A29.3 (a)(2)</u>. This is always required as applicable.

- a. The description of the appliances should include the type of appliance, the manufacturer, model, and identification, etc.
- b. The description of the appliance systems should include the component or parts of the system and how systems interface with the rotorcraft or other systems.
- c. The description of the appliance installations should include the location of the installation and how the system is installed.

6. BASIC CONTROL AND OPERATING INFORMATION

Basic control and operating information describing:

- a. How the rotorcraft components and systems are controlled.
- b. How the rotorcraft components and systems are operated.

REVISION: (PAGE NUMBER)
Revision 3 ()-00-00 Page 2

- c. Any special procedures and limitations that apply.

 Reference Appendix A, A29.3 (a)(3). This is required if engine(s), rotor(s), and/or appliances require controlling or operating.
 - d. The information should identify the appliance or component and should identify the control(s) and system used to control the appliance or component.
 - e. The ICA should provide instructions on operating the appliance or component and any limitation or precautions. Operations information can be found in the Rotorcraft Flight Manual or Pilot Operating Handbook. However, basic control and operating information is an Appendix A requirement and should be contained in the ICA.

7. SERVICING INFORMATION

Servicing information that covers details regarding:

- a. Servicing points and their locations.
- b. Types of fluids to be used.
- c. Capacities of tanks and reservoirs.
- d. Pressures applicable to the various systems.

<u>Reference Appendix A, A29.3 (a)(4).</u> This is required when applicant determines the rotorcraft and its engine(s), rotor(s), and appliances will require servicing. The information is normally included in chapters that address servicing and in Chapter 12.

8. LOCATION OF ACCESS PANELS

Location of access panels for inspection and servicing.

<u>Reference Appendix A, A29.3 (a)(4).</u> This is required when panels, plates, fairing, cowling, etc. should be removed to provide access to the rotorcraft, its engine(s), rotor(s), and appliances for inspection and servicing. This information is normally included in chapters that address access and in Chapters 6 and 12.

9. LUBRICATING INFORMATION

Lubricating information that covers details regarding:

a. Lubrication points and their location.

REVISION: (PAGE NUMBER)
Revision 3 ()-00-00 Page 3

b. Types of lubricants to be used.

<u>Reference Appendix A, A29.3 (a)(4).</u> This is required when applicant determines the rotorcraft and its engine(s), rotor(s), and appliances will require lubrication. The information is normally included in chapters that address lubrication and in Chapter 12.

10. EQUIPMENT REQUIRED FOR SERVICING

Equipment required for servicing and lubricating. Reference Appendix A, A29.3 (a)(4). This is required when applicant determines equipment will be required for servicing and lubricating the rotorcraft and its engine(s), rotor(s), and appliances. The information is normally included in chapters addressing equipment for servicing or lubrication and in Chapter 12. In addition, the equipment required for servicing and lubricating should be listed in the List of Special Tools contained in Chapter 1.

11. RECOMMENDED PERIODS

The recommended period at which each part of the rotorcraft and its engine(s), auxiliary power unit, rotor(s), accessories, instruments, and equipment should be:

- a. Cleaned.
- b. Inspected.
- c. Adjusted.
- d. Tested.
- e. Lubricated.

Reference Appendix A, A29.3 (b)(1). This is always required as applicable.

f. There is no specific format for the recommended periods, however, the ICA should include the time and/or interval the above items are to be accomplished.

12. DEGREE OF THE INSPECTION

The degree (scope) of the inspection for each part of the rotorcraft and its engine(s), auxiliary power unit, rotor(s), accessories, instruments and equipment. Reference

Appendix A, A29.3 (b)(1). It is required for each part of the rotorcraft and its engine(s), auxiliary power unit, rotor(s), accessories, instruments, and equipment, which is required to be inspected. This information is normally contained in the chapters of the item being inspected and Chapter 5.

REVISION:	(PAGE NUMBER)
Revision 3	()-00-00 Page 4

13. WORK RECOMMENDED

The work recommended at these periods when each path of the rotorcraft was cleaned, inspected, adjusted, tested, and lubricated. Reference Appendix A, A29.3 (b)(1). This is required when applicant determines that work will be recommended for that part of the rotorcraft at that period. When maintenance tasks are associated with cleaning, inspecting, adjusting, testing or lubrication of each part of the rotorcraft and its engine(s), auxiliary power unit, rotor(s), accessories, instruments and equipment, then those tasks should be included in the ICA. This information is normally contained in the chapters that the work is required.

14. APPLICABLE WEAR TOLERANCES

The applicable wear tolerances. <u>Reference Appendix A, A29.3 (b)(1).</u> This is required when applicant determines that wear tolerances will be required for the rotorcraft, its engine(s), rotor(s), and appliances. When a procedure requires maintenance personnel to determine whether the item being inspected or maintained meets a standard, the ICA should include the standard and specify how much wear is acceptable. The tolerances are normally contained in the chapter addressing the tolerance.

15. TROUBLESHOOTING

Troubleshooting information describing:

- a. Probable malfunctions.
- b. How to recognize those malfunctions. (Probable Cause)
- c. The remedial (corrective) action for those malfunctions.

 <u>Reference Appendix A, A29.3 (b)(2).</u> This is required when applicant determines the rotorcraft, its engine(s), rotor(s), and appliances require troubleshooting.
 - d. The use of a table is recommended. A sample is shown below

Malfunction	Probable Cause	Corrective Action
Describe the malfunction.	List all probable causes of the	Provide a corrective action for
	malfunction.	all probable causes.

e. Troubleshooting information is normally contained in the chapters where troubleshooting is required.

REVISION:	(PAGE NUMBER)
Revision 3	()-00-00 Page 5

16. ORDER AND METHOD OF REMOVAL

Information describing the order and method of removal of products and parts with any necessary precautions to be taken. <u>Reference Appendix A, A29.3 (b)(3)</u>. This is required when products and parts can be removed as part of maintenance. This includes the removal of products and parts in conjunction with a repair.

- a. The order is a step-by-step procedure: what is the first thing you do, then what is next, until the product or part is removed.
- b. The method is the procedure or process used to remove the product or part. If the removal of a product or part could result in injury to personnel or damage to the rotorcraft if not done correctly, the ICA should include precaution. See Chapter 1, Paragraph 13.
- c. The information is normally contained in the chapters requiring removal of the product or part.

17. ORDER AND METHOD OF REPLACING

Information describing the order and method of replacing products and parts with any necessary precautions to be taken. Reference Appendix A, A29.3 (b)(3). This is required when products and parts can be replaced.

- a. The order is a step by step procedure, what is the first thing you do, then what is next until the product or part is replaced (reinstalled).
- b. The method is the procedure or process used to replace (reinstall) the product or part. If the replacement of a product or part could result in injury to personnel or damage to the rotorcraft if not done correctly, the ICA should include precaution. See Chapter 1, Paragraph 13.
- c. The use of the phrase "Install in reverse order" does not meet the requirements of the FAR/JAR and should not be used in the ICA.
 - d. The information is normally contained in the chapters requiring replacement of the part.

18. GENERAL PROCEDURAL INSTRUCTIONS -TESTING

General procedural instructions including procedures for system testing during ground run. <u>Reference Appendix A, A29.3 (b)(4).</u> This is required when system testing during ground run is specified. The information is normally contained in the chapters requiring the test, or applicant may have a section for special inspections, tests, and checks.

REVISION: (PAGE NUMBER)
Revision 4 ()-00-00 Page 6

19. GENERAL PROCEDURAL INSTRUCTIONS – CHECKS

General procedural instructions including procedures for symmetry checks. Reference Appendix A, A29.3 (b)(4). This is required when applicant specifies that symmetry checks are required. The information is normally contained in the chapters addressing the symmetry checks, or applicant may have a section for special inspections, tests, and checks.

20. STORAGE LIMITATIONS

Storage Limitations. Reference Appendix A, A29.3 (b)(3). This is required when the rotorcraft, engine, appliance manufacturer, or consumable materials manufacturer determines there is a storage limitation.

- a. There are various storage limitations. The applicant needs to identify those storage limitations, provide procedure for storage, and a means to ensure the storage limitations are not exceeded.
 - b. The information is normally contained in the chapter specifying the storage.
- 21. SPECIAL INSPECTION TECHNIQUES. Details for the application of special inspection techniques including radiographic and ultrasonic testing where such processes are required. Reference Appendix A, A29.3 (d). This is required when applicant specifies special inspection techniques will be required.
 - a. The ICA should include the equipment required for the special inspection.
 - b. The ICA should include the procedure for conducting tests, including any precautions. See Chapter 1, Paragraph 13.
- c. The information is normally contained in the chapters requiring special inspection techniques, or the applicant may have a section for special inspections, tests, and checks.

22. PROTECTIVE TREATMENT

Information needed to apply protective treatment to a structure after inspection.

Reference Appendix A, A29.3 (e). This is required when applicant determines protective treatment will be required for structure.

- a. The ICA should include procedures for applying protective treatment.
- b. The ICA should specify type of materials to be used.
- c. The ICA should include the precautions associated with the protective treatment.

REVISION: (PAGE NUMBER)
Revision 4 ()-00-00 Page 7

d. The information is normally contained in the chapters that require the treatment.

23. STRUCTURAL FASTENERS

Information relative to structural fasteners such as identification of structural fasteners, structural fasteners discard recommendations, and torque values. Reference Appendix A, A29.3 (f). This is required when structural fasteners are used and torque values are required.

- a. The ICA should identify all structural fasteners, i.e., rivets, screws, bolts, or others.
- b. The ICA should specify the requirements for discarding structural fasteners.
- c. When a structural fastener is required to be torqued, the ICA should contain those specific torques and the procedure to torque the structural fastener.
 - d. Torque values must be specific and in United States or metric standards.
- e. The information is normally contained in the chapters specifying structural fasteners and torque values.

24. SPECIAL TOOLS

A List of Special Tools. <u>Reference Appendix A, A29.3 (g).</u> This is required when special tools or equipment are specified in the chapters of the ICA.

- a. When a procedure in the ICA requires the use of a special tool(s), that tool should be listed in the List of Special Tools.
 - b. The List of Special Tools is normally contained in the Introduction.

REVISION: Revision 4

(PAGE NUMBER) ()-00-00 Page 8

The following is a breakdown of Appendix A to FAR/JAR Part 29 and is intended to provide guidance to assist an applicant for a Type Design Change under a Type Certificate (TC), Supplemental Type Certificate (STC), or Field Approval (FA) requiring Instructions for Continued Airworthiness (ICA). This breakdown is intended to provide guidance to assist an applicant in understanding the ICA requirements of § 29.1529. An applicant may use the guidance to prepare the ICA. Completion of this appendix will provide information needed for the evaluation and will reduce the time required for evaluation of the proposed ICA. The open parentheses () in the Requirement column indicates the status of ICA Requirements: Y = applicable; N/A = non-applicable. In the Location column, list the page number in the applicant's ICA that contains the information.

Project Number(s) _____ ____ ____

ACO/FSDO	Projec	ct Engineer		
Applicant	Make	Model	Date	
Require	ement		Regulation	Location
() ICA for each engine.			A29.1(b)	
() ICA for each rotor.			A29.1(b)	
() ICA for each appliance requi	red by this d	chapter.	A29.1(b)	
() Any required information relation () appliances, () engines and rotorcraft.			A29.1(b)	
() If ICA are not supplied by the appliance, () engine or () rot the ICA for the rotorcraft must incessential to the continued airwork	tor installed clude () th	in the rotorcraft, e information	A29.1	
() A program showing how cha	nges to the	applicant's ICA will	A29.1(c)	
() A program showing how cha manufacture of the engine(s), rote the rotorcraft will be distributed, it	or(s) and app	oliances installed in	A29.1(c)	
() ICA must be in the form of a appropriate for the quantity of date	manual or n		A29.2(a)	
() A format of the manual or manual	anuals whic	h must provide for	A29.2(b)	
() Content must be prepared in	the English	language.	A29.3	
() Introduction information that of the rotorcraft's features and (for maintenance and preventive n) data to th	e extent necessary	A29.3(a)(1)	

FIGURE 1

Requirement	Regulation	Location
() A description of the () rotorcraft and its systems and	A29.3(a)(2)	
installations, () engines and its systems and installations,		
() rotors and its systems and installations, and		
() appliances and its systems and installations.		
() Basic control and operating information describing ()	A29.3(a)(3)	
how the rotorcraft components and systems are controlled and		
() how the rotorcraft components and systems are operated		
including () any special procedure and limitations.		
() Servicing information that covers details regarding ()	A29.3(a)(4)	
servicing points, () capacities of tanks, () capacities of		
reservoirs, () types of fluids to be used, and () pressures		
applicable to the various systems.		
() Location of access panels for () inspection and ()	A29.3 (a)(4)	
servicing.		
() Servicing information that covers details regarding ()	A29.3(a)(4)	
locations of lubrication points, and () the lubricant to be		
used.		
() Equipment required for servicing.	A29.3(a)(4)	
() Tow instructions and limitations.	A29.3(a)(4)	
() Mooring information.	A29.3(a)(4)	
() Jacking information.	A29.3(a)(4)	
() Leveling information.	A29.3(a)(4)	
() Scheduling information for each part of the () rotorcraft	A29.3(b)(1)	
that provides the recommended periods at which they should be		
() cleaned, () inspected, () adjusted, () tested,		
() lubricated and () the work recommended at these		
periods.		
() Scheduling information for the () rotorcraft's engine(s)	A29.3(b)(1)	
that provides the recommended periods at which they should be		
() cleaned, () inspected, () adjusted, () tested,		
() lubricated and () the work recommended at these		
periods.		
NOTE: This information may be in the FAA/AUTHORITY-accepted		
engine ICA.	100 07 177	
() Scheduling information for the () rotorcraft's auxiliary	A29.3(b)(1)	
power unit(s) (APU) that provides the recommended periods		
they should be () cleaned, () inspected, () adjusted,		
() tested, () lubricated, and () the work recommended at		
these periods.		

Figure 1 (continued)

REVISION: Revision 4

(DATE) Page 2

Requirement	Regulation	Location
() Scheduling information for the () rotorcraft's rotor(s) that	A29.3(b)(1)	
provides the recommended periods at which they should be (
) cleaned, () inspected, () adjusted, () tested, () lubricated, and () the work recommended at these		
periods.		
() Scheduling information for the () rotorcraft's	A29.3(b)(1)	
accessories that provides the recommended periods at which		
they should be () cleaned, () inspected, () adjusted,		
() tested, () lubricated, and () the work recommended at		
these periods. () Scheduling information for the () rotorcraft's	A29.3(b)(1)	
instruments that provides the recommended periods at which	A29.3(D)(1)	
they should be () cleaned, () inspected, () adjusted,		
() tested, () lubricated, and () the work recommended at		
these periods.		
() Scheduling information for the () rotorcraft's equipment	A29.3(b)(1)	
that provides the recommended periods at which they should		
() cleaned, () inspected, () adjusted, () tested, () lubricated, and () the work recommended at these		
periods.		
() The degree of inspection for each part of the () rotorcraft	A29.3(b)(1)	
and its () engine(s), () auxiliary power unit, () rotor(s),	, ,, ,	
() accessories, () Instruments, and () equipment.		
() The applicable wear tolerances	A29.3(b)(1)	
The applicant may refer to an () accessory, () instrument, or	A29.3(b)(1)	
() equipment manufacturer as the source of this information if the applicant shows () that the item has an exceptionally high		
degree of complexity requiring specialized maintenance		
techniques, test equipment, or expertise.		
() The recommended overhaul periods and necessary cross	A29.3(b)(1)	
references to the Airworthiness Limitation Section.		
() An inspection program that includes () the frequency	A29.3(b)(1)	
and () extent of the inspection necessary to provide for the continued airworthiness of the rotorcraft.		
() Troubleshooting information describing () problem	A29.3(b)(2)	
malfunctions, () how to recognize those malfunctions, and	A23.3(D)(2)	
() the remedial action for those malfunctions.		
() Information describing the order and method of	A29.3(b)(3)	
() removing and () replacing engine(s) with any necessary		
precautions to be taken.		
Figure 1 (continued)		

Figure 1 (continued)

Requirement	Regulation	Location
() Information describing the order and method of	A29.3(b)(3)	
() removing and () replacing rotor(s) with any necessary		
precautions to be taken.		
() Information describing the order and method of	A29.3(b)(3)	
() removing and () replacing parts with any necessary	. ,, ,	
precautions to be taken.		
() Other general procedural instructions including	A29.3(b)(4)	
() storage limitations and procedures for () testing system		
during ground running, () making symmetry checks,		
() weighing and determining the center of gravity, () lifting,		
and () shoring.		
() Diagrams of structural access plates and information	A29.3(c)	
needed to gain access for inspections when access plates are		
not provided.	100 0/ 1)	
() Details for the application of special inspection techniques	A29.3(d)	
including radiographic and ultrasonic testing where such		
processes are specified.	400.0(a)	
() Information needed to apply projective treatment to structure after inspection.	A29.3(e)	
() All data relative to structural fasteners such as	A 20, 2/f)	
() identification, () discarded recommendations, and	A29.3(f)	
() torque values.		
() A list of special tools needed.	A29.3(g)	
() The Instructions for Continued Airworthiness must contain	A29.4	
a section, titled Airworthiness Limitations that is	712077	
() segregated and () clearly distinguishable from the rest of		
the document. NOTE: The Airworthiness Limitations Section in the		
applicant's ICA will be evaluated by the appropriate FAA/AUTHORTY.		
() The Airworthiness Limitations Section must set forth each	A29.4	
mandatory replacement time, structural inspection procedure		
approved under § 29.571.		
() If the Instructions for Continued Airworthiness consist of	A29.4	
multiple documents, the Airworthiness Limitations Section		
required by this paragraph must be included in the principal		
manual.		

Figure 1 (continued)

ATTACHMENT 1 PART 29 REQUIREMENTS

Requirement	Regulation	Location
() The Airworthiness Limitations Section must contain a	A29.4	
legible statement in a prominent location indicating that the		
Airworthiness Limitations Section is FAA/AUTHORITY-approved		
and specifies required maintenance and/or inspections. The		
exact, required wording of this statement is found in the		
FAR/JAR.		

Figure 1 (continued)

NOTE: The Airworthiness Limitations Section (ALS) is evaluated and approved by the FAA/AUTHORITY. The applicant's proposed ICA is submitted to the FAA/AUTHORITY.

THIS PAGE INTENTIONALLY LEFT BLANK

ATTACHMENT 2 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS PROCEDURES INFORMATION

The procedures information in this appendix is not a requirement. It is intended as guidance to assist the applicant in preparing procedures for Instructions for Continued Airworthiness (ICA).

An ICA is required when field maintenance personnel are authorized to remove, disassemble, assemble, clean, inspect, check, repair, replace, install, service, lubricate, test, troubleshoot, adjust, or apply a protective treatment to a rotorcraft, its engine(s), rotor(s), or appliances.

The following topics should be considered when preparing procedures for an ICA.

- 1. Provide general information about the appliance.
- 2. Provide a description of the appliance in the procedures.
- 3. Specify necessary precautions to be taken during the procedures and include them in Notes, Cautions, and Warnings.
 - 4. Specify tool(s), special tool(s), or equipment required for the procedures.
 - 5. Specify torque value(s) for the appliances and attaching hardware.
 - 6. Provide information to gain access to the appliance.
- 7. Consumable materials should be identified by specification/part number, product name, or manufacturer.
- 8. Identify the appliance to be removed, disassembled, cleaned, inspected, checked, repaired, replaced, assembled, checked, serviced, tested, adjusted, or operated.
- 9. Develop order and method procedures for removing, and/or replacing the appliance, including a procedure to protect opening, lines, and hoses, etc., from contamination.
- 10. Develop order and method procedures for disassembly and assembly of the appliance, including any special process required and safety precautions.
- 11. Develop order and method procedures for cleaning the appliance, including any special process(es) to be used during cleaning. Identify type of cleaning materials.
- 12. Specify what inspections or checks are required and their interval. Develop order and method for inspecting the appliance, including special inspection techniques, standards and limits. Describe what actions are to be taken when appliance is found unacceptable.

ATTACHMENT 2 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS PROCEDURES INFORMATION (Continued)

- 13. Develop order and method procedures for making the repair. Identify the type of damage and limits that can be repaired and specify inspection required before the repair can be made. Specify special process(es) to be used to make the repair and acceptable repair materials.
- 14. Develop order and method procedures for applying protective treatment to the appliance, including any special process(es) to be used during treatment. Specify the type of protective material to be used.
- 15. Develop order and method procedures for installation of the appliance. Specify special procedure and process(es) to be used. Specify measurements, clearances, and torques for the appliance being installed.
- 16. Develop order and method procedures for servicing, lubricating, or draining the appliance. Specify the type of servicing material, the quantity, and limits. Specify safety equipment and safety precautions.
- 17. Develop order and method procedures for testing the part. Specify the type of test and equipment required for the test, including location of connection points. Specify test standards and limits for the appliance being tested. Describe what action should be taken when the test results are unacceptable.
- 18. Develop order and method procedures for troubleshooting the appliance. Provide troubleshooting information, problem malfunction, and remedial actions.
- 19. Develop order and method procedures for adjusting the appliance. Specify location for adjusting, and the standards and limits of adjustments. Specify special tool(s) or equipment required to make adjustments. Describe actions to be taken when adjustment is past limits. Provide safety precautions and safety equipment required for adjustment.
- 20. Develop order and method for safetying or securing the appliances and specify the types of safetying devices.

ATTACHMENT 3 ATA CHAPTER LISTINGS

Listed below are the ATA chapters and their titles.

AIRCRAFT GENERAL	STRUCTURAL
Chapter 4 Airworthiness Limitations Chapter 5 Inspection Requirements	Chapter 51 Standard Practices - Structure Chapter 52 Doors
Overhaul Requirements	Chapter 53 Fuselage
Chapter 6 Principal Dimension	Chapter 54 Nacelles and Pylons
Chapter 7 Lifting and Shoring	Chapter 55 Stabilizers
Chapter 8 Leveling and Weighing Chapter 9 Towing and Taxing	Chapter 56 Windows
Chapter 9 Towing and Taxing Chapter 10 Parking and Mooring	
Chapter 10 Farking and Mooning Chapter 11 Placards and Markings	ROTORS
Chapter 12 Servicing	Notono
Chapter 12 Convioung	Chapter 60 Standard Practices -Rotors
	Chapter 62 Main Rotor
AIRFRAME SYSTEMS	Chapter 63 Main Rotor Drive
	Chapter 64 Anti Torque
Chapter 20 Standard Practices - Airframe	Chapter 65 Anti Torque Drive
Chapter 21 Air Conditioning	Chapter 66 Folding Blades
Chapter 22 Autoflight	Chapter 67 Rotor Flight Controls
Chapter 23 Communications	
Chapter 24 Electrical power	POWERPLANT
Chapter 25 Equipment and Furnishings	
Chapter 26 Fire Detection	Chapter 70 Standard Practice Engines
Chapter 28 Fuel	Chapter 71 Powerplant
Chapter 29 Hydraulic Power	Chapter 72 Engine
Chapter 30 Ice and Rain Protection	Chapter 73 Engine Fuel and Control
Chapter 31 Indicating and Recording	Chapter 74 Ignition
Chapter 32 Landing Gear	Chapter 75 Engine Air
Chapter 33 Lights	Chapter 76 Engine Controls
Chapter 34 Navigation	Chapter 77 Indicating
Chapter 35 Oxygen	Chapter 78 Exhaust
Chapter 36 Pneumatics	Chapter 79 Oil
Chapter 37 Vacuum	Chapter 80 Starting
Chapter 45 Centralized Maintenance Sys	Chapter 83 Gear Boxes
Chapter 49 Airborne Auxiliary Power	



THIS PAGE INTENTIONALLY LEFT BLANK

The following information is intended for guidance to assist the applicant in preparing an ICA.

For this sample, we will use a twidget, which is a sounder attached to an extendible cable assembly connected to a pivoting arm, which is mounted to the side of the fuselage structure at the right cabin door forward frame.

NOTE: The twidget manufacturer's ICA does not meet the requirements of Appendix A and cannot be referenced.

The following step-by-step procedure in this sample can be used to prepare an ICA for that appliance:

- 1. Determine the following:
 - a. What modifications to the rotorcraft will be required.
 - b. Determine what appliances will be replaced or added to the rotorcraft.
- c. Determine which ATA chapters of the original rotorcraft manufacturer's maintenance manual will be affected by this TDC and which additional ATA chapters will be affected.
- 2. Review Appendix A, Part 29. Using the information derived in paragraph 1, determine which paragraphs are applicable and which are not applicable. As defined in Figure 2, provide the status of each requirement on the applicable paragraph. If the requirement is not applicable, place an N/A within the parentheses (). Address the remaining requirements in the ICA. A completed document for the twidget installation (Figure 2) is included.
- 3. Prepare the ICA, which includes the applicable requirements specified in Appendix A to Part 29. This can be done by using the information provided in the Instructions for Continued Airworthiness template. The regulatory requirements in the sample manual are in bold type. Information to be copied is in normal type. Information in italics is for information only and should not be copied. See Instructions for Continued Airworthiness template.
- 4. Ensure the ICA includes the following:
- a. A Cover Page, readily identifying the publication as the applicant's ICA for that make and model rotorcraft.
- b. A List of Effective Pages, listing each page in the ICA and its revision number and revision date.
 - c. A Record of Revisions Page listing the revisions which have been inserted in the ICA.

REVISION:	(DATE)
Revision 3	Page 1

- 5. Table of Contents is not required, but we recommend it be included in the ICA.
- 6. Audit the proposed ICA to ensure the applicable requirements have been included. Edit the ICA document ensuring it does not contain incorrect terminology or incorrect references, and determine it does contain correct spelling, proper grammar, and accurate information.
- 7. When referencing another publication, ensure the information in the referenced publication meets the requirements of Appendix A, Part 29. It is the responsibility of the applicant to obtain authorization to use the information contained in the referenced publication. Submit a copy of each publication referenced in the applicant's ICA.
- 8. Submit two complete copies of the proposed ICA in binders, a copy of the completed Figure 1 document, and a copy of any referenced publication to the FAA/AUTHORITY, in sufficient time to allow for evaluation prior to the date acceptance is needed. The average turnaround time is 20 to 30 days depending on the workload.
- 9. When FAA/AUTHORITY receives the applicant's proposed ICA, the applicant and the appropriate FAA/AUTHORITY are notified. FAA/AUTHORITY reviews and evaluates the ICA in the order they are received.
- 10. If FAA/AUTHORITY finds the applicant's ICA does not meet the requirements, the review will be discontinued, and the applicant will be notified.
- 11. When the proposed ICA document, excluding the Airworthiness Limitations Section, is determined to be acceptable, the FAA/AUTHORITY will stamp, sign, and date the ICA. The applicant will be notified of the acceptance.

Twidget Type Design Change Attachment 2

- 1. Use the list of appliances and modifications required for that Type Design Change (TDC) to determine which ATA chapters of the original rotorcraft manufacturer's maintenance manual the TDC will affect and which additional ATA chapters will be affected.
- 2. The following are components and systems that will be affected by the twidget TDC:
 - a. Fuselage structure will be modified to mount twidget arm assembly.
 - b. Cabin door will be modified.
 - c. Electrical power will be required for electrical motor.
 - d. Hydraulic power source will be required for deploying and storing twidget arm.
 - e. Twidget control assembly will be installed in the cabin.
 - f. Control will be mounted in cockpit for emergency release of the twidget.
 - g. An instrument will be installed in instrument panel indicating twidget's position.
 - h. Twidget recording equipment and monitor will be mounted in cabin.
 - i. Twidget antenna will be mounted on belly of fuselage.
 - j. Cables and wiring will be routed through rotorcraft.
 - k. Two-way communication will be required between the pilot and twidget operator.
 - 1. Twidget gearbox requires servicing to full mark on site gauge every 50 hours.
 - m. Twidget arm assemblies and clutch requires lubrication every 100 hours.
 - n. Twidget installation requires an inspection every 300 hours.
 - o. Twidget arm assembly requires an ultrasonic test every 600 hours.
 - p. Clutch has a wear tolerance of 1.56 mm.
 - q. Clutch is life-limited to be replaced every I,000 hours time in service.
 - r. Twidget gearbox is required to be overhauled every I,000 hours time in service.
 - s. Twidget gearbox attach bolt torque is 75-ft. lb. and twidget arm assembly torque is 110 in. lb.
 - t. Warning: Twidget should be retracted during takeoff, landing, and cruise above 85 knots.
 - u. Caution: Do not tow or taxi the rotorcraft with the twidget arm deployed.
 - v. Placards are required on the twidget unit and in the cockpit.
- 3. This example TDC will affect ATA-100 chapters: 4 Airworthiness Limitations, 5 Inspection, 6 Dimensions, 9 Towing and Taxiing, 10 Parking and Mooring, 11 Placards, 12 Servicing, 23 Communication, 24 Electrical, 25 Furnishings, 29 Hydraulic, 31 Indication and Recording, 52 Doors, and 53 Fuselage. A Chapter 1 Introduction is also needed.

ATTACHMENT 4 TYPE DESIGN CHANGE ICA RECOMMENDED PROCEDURES (Continued)

INFORMATION:

Attachment 4 includes Figure 2 for Thomas Copter Mods TDC to affix a twidget installation on Thomas Copter model T-97J helicopter.

Figure 2 is intended to assist in determining which requirements are applicable to this certification project. The document contains each requirement with a set of parentheses, the appropriate regulation, and the location of information in the applicant's ICA.

Information obtained from Attachment 4 can be used to determine which requirements are applicable. For requirements that are not applicable, place an N/A in the parentheses. All other requirements would be applicable to the certification project. Place a Y if the required information is included in ICA. Figure 2 has been completed for the sample twidget TDC.

Applicant using and completing Figure 1 indicating the location of that information in the applicant's proposed ICA, will reduce the time required to evaluate the ICA.

It is important the applicant include the project number or numbers associated with the ICA, the name of the appropriate FAA/AUTHORITY office, name of the project engineer, applicant's company name, make and model of rotorcraft being modified, and date.

The completed Figure 1 should be submitted to FAA/AUTHORITY with the applicant's ICA.

APPENDIX A PART 29 REQUIREMENTS

The following is a breakdown of Appendix A to FAR/JAR Part 29 and is intended to provide guidance to assist an applicant for a Type Design Change under a Type Certificate (TC), Supplemental Type Certificate (STC), or Field Approval (FA) requiring Instructions for Continued Airworthiness (ICA). The breakdown is intended to provide guidance to assist an applicant in understanding the ICA requirements of FAR/JAR § 29.1529. An applicant may use the guidance in preparing the ICA. Completion of this appendix will provide information needed for the evaluation and will reduce the time required for evaluation of the proposed ICA.

() Status of ICA: Y = Yes included; N/A = non-applicable. The Location column lists the page number in the applicant's ICA containing the information.

Project Number(s) ST01998RC-R

ACO/FSDO: Rotorcraft ACO Project Engineer: Data Mastermine

Applicant: Thomas Copter Mods Make: Thomas Copter Model: T97-J Date June 18, 1998

Requirement	Regulation	Location
(N/A) ICA for each engine	A29.1(b)	N/A
(N/A) ICA for each rotor	A29.1(b)	N/A
(Y) ICA for each appliance required by this chapter.	A29.1(b)	* All
(Y) Any required information relating to the interface of the	A29.1(b)	See
(Y) appliances, (N/A) engines and (N/A) rotors with the		NOTE 1
rotorcraft.		
(Y) If ICA are not supplied by the manufacturer of an	A29.1	* All
(N/A) appliance, (N/A) engine or (N/A) rotor installed in the		
rotorcraft, the ICA for the rotorcraft must include (Y) the		
information essential to the continued airworthiness of the		
rotorcraft.		
(Y) A program showing how changes to the applicant's ICA will	A29.1(c)	ATA 0
be distributed.		
(N/A) A program showing how changes to the ICA of the	A29.1(c)	N/A
manufacture of the engine(s), rotor(s) and appliances installed in		
the rotorcraft will be distributed, if referenced in applicant's ICA		
(Y) ICA must be in the form of a manual or manuals as	A29.2(a)	* All
appropriate for the quantity of data.		
(Y) A format of the manual or manuals must provide for a	A29.2(b)	* All
practical arrangement.		
(Y) Content must be prepared in the English language.	A29.3	* All

Figure 2

Requirement	Regulation	Location
(Y) Introduction information that includes (Y) an explanation	A29.3(a)(1)	ATA 0
of the rotorcraft's features and (Y) data to the extent necessary		
for maintenance and preventive maintenance.		
(Y) A description of the (N/A) rotorcraft and its systems and	A29.3(a)(2)	ATA 25
installations, (N/A) engines and its systems and installations,		
(N/A) rotors and its systems and installations, (Y) appliances		
and its systems and installations.		
(Y) Basic control and operating information describing	A29.3(a)(3)	ATA 25
(Y) how the rotorcraft components and systems are controlled		
and (Y) how the rotorcraft components and systems are		
operated including (Y) any special procedure and limitations.		
(Y) Servicing information that covers details regarding (Y)	A29.3(a)(4)	ATA 12
servicing points, (N/A) capacities of tanks, (Y) capacities of		
reservoirs, (Y) types of fluids to be used, (Y) pressures		
applicable to the various systems.	4000 () ()	
(Y) Location of access panels for (Y) inspection and	A29.3 (a)(4)	See
(Y) servicing.	400 0()(4)	NOTE 2
(Y) Servicing information that covers details regarding	A29.3(a)(4)	ATA 12
(Y) locations of lubrication points, (Y) the lubricant to be		
used.	420.2(=)(4)	ATA 40
(Y) Equipment required for servicing.	A29.3(a)(4)	ATA 12
(Y) Tow instructions and limitations.	A29.3(a)(4)	ATA 10
(Y) Mooring information.	A29.3(a)(4)	ATA 10
(N/A) Jacking information.	A29.3(a)(4)	N/A
(N/A) Leveling information.	A29.3(a)(4)	N/A
(Y) Scheduling information for each part of the (Y) rotorcraft	A29.3(b)(1)	See
that, provides the recommended periods at which they should		NOTE 3
be (Y) cleaned, (Y) inspected, (Y) adjusted, (Y) tested, (Y) lubricated, and (Y) the work recommended at these		
periods.		
(N/A) Scheduling information for the (N/A) rotorcraft's engine(s)	A29.3(b)(1)	N/A
that provides the recommended periods at which they should be	M23.3(D)(1)	1 1 1 / / / .
(N/A) cleaned, (N/A) inspected, (N/A) adjusted, (N/A) tested,		
(N/A) lubricated and (N/A) the work recommended at these		
periods. NOTE: This information may be in the FAA/AUTHORITY		
accepted engine ICA.		
, , ,		

Figure 2 (continued)

Requirement	Regulation	Location
(N/A) Scheduling information for the (N/A) rotorcraft's auxiliary	A29.3(b)(1)	N/A
power unit(s)(APU) that provides the recommended periods at		
which they should be (N/A) cleaned, (N/A) inspected,		
(N/A) adjusted, (N/A) tested, (N/A) lubricated and (N/A) the work		
recommended at these periods.		
(N/A) Scheduling information for the (N/A) rotorcraft's rotor(s)	A29.3(b)(1)	N/A
that provides the recommended periods at which they should		
be (N/A) cleaned, (N/A) inspected, (N/A) adjusted, (N/A) tested,		
(N/A) lubricated, and (N/A) the work recommended at these		
periods.		
(Y) Scheduling information for the (Y) rotorcraft's	A29.3(b)(1)	See
accessories that provides the recommended periods at which		NOTE 3
they should be (Y) cleaned, (Y) inspected, (Y) adjusted,		
(Y) tested, (Y) lubricated, and (Y) the work recommended at		
these periods.		
(Y) Scheduling information for the (Y) rotorcraft's	A29.3(b)(1)	See
instruments that provides the recommended periods at which		NOTE 3
they should be (Y) cleaned, (Y) inspected, (Y) adjusted,		
(Y) tested, (Y) lubricated, and (Y) the work recommended		
at these periods.	400 0/h\/4\	Coo
(Y) Scheduling information for the (Y) rotorcraft's equipment	A29.3(b)(1)	See NOTE 3
that provides the recommended periods at which they should be		NOTES
(Y) cleaned, (Y) inspected, (Y) adjusted, (Y) tested, (Y) lubricated, and (Y) the work recommended at these		
periods.		
(Y) The degree of inspection for each part of the (N/A)	A29.3(b)(1)	ATA 5
rotorcraft and its (N/A) engine(s), (N/A) auxiliary power unit,	()()	
(N/A) rotor(s), (Y) accessories, (Y) instruments, and		
(Y) equipment.		
(Y) The applicable wear tolerances.	A29.3(b)(1)	ATA 25
The applicant may refer to an (N/A) accessory, (N/A) instrument,	A29.3(b)(1)	N/A
or (N/A) equipment manufacturer as the source of this		
information, if the applicant shows (N/A) that the item has an		
exceptionally high degree of complexity requiring specialized		
maintenance techniques, test equipment, or expertise.		
(Y) The recommended overhaul periods and necessary cross	A29.3(b)(1)	ATA 5
references to the Airworthiness Limitation Section.		

Figure 2 (continued)

		1
Requirement	Regulation	Location
(Y) An inspection program that includes (Y) the frequency	A29.3(b)(1)	ATA 5
and (Y) extent of the inspection necessary to provide for the		
continued airworthiness of the rotorcraft.		
(Y) Troubleshooting information describing (Y) problem	A29.3(b)(2)	See
malfunctions, (Y) how to recognize those malfunctions, and		NOTE 4
(Y) the remedial action for those malfunctions.		
(N/A) Information describing the order and method of	A29.3(b)(3)	N/A
(N/A) removing and (N/A) replacing engine(s) with any necessary	,	
precautions to be taken.		
(N/A) Information describing the order and method of	A29.3(b)(3)	N/A
(N/A) removing and (N/A) replacing rotor(s) with any necessary		
precautions to be taken.		
(Y) Information describing the order and method of	A29.3(b)(3)	ATA 25
(Y) removing and (Y) replacing parts with any necessary		
precautions to be taken.		
(Y) Other general procedural instructions including	A29.3(b)(4)	ATA 8
(N/A) storage limitations and procedures for (N/A) testing system	1	
during ground running, (N/A) making symmetry checks,		
(Y) weighing and determining the center of gravity,		
(N/A) lifting, (N/A) shoring.		
(N/A) Diagrams of structural access plates and information	A29.3(c)	N/A
needed to gain access for inspections when access plates are		
not provided.		
(N/A) Details for the application of special inspection techniques	A29.3(d)	N/A
including radiographic and ultrasonic testing where such		
process are specified.		
(N/A) Information needed to apply protective treatment to	A29.3(e)	N/A
structure after inspection.		
(Y) All data relative to structural fasteners such as	A29.3(f)	ATA25
(Y) identification, (Y) discarded recommendations, and		
(Y) torque values.		
(Y) A list of special tools needed	A29.3(g)	See
	,	NOTE 5
(Y) The Instructions for Continued Airworthiness must contain	A29.4	ATA 4
a section, titled Airworthiness Limitations that is		
(Y) segregated and (Y) clearly distinguishable from the rest		
of the document. NOTE: The Airworthiness Limitations Section in		
the applicant's ICA will be evaluated by the appropriate		

Figure 2 (continued)

ATTACHMENT 4 TYPE DESIGN CHANGE ICA RECOMMENDED PROCEDURES (Continued)

Requirement	Regulation	Location
(N/A) The Airworthiness Limitations Section must set forth each mandatory replacement time, structural inspection procedure approved under § 29.571.	A29.4	N/A
(Y) If the Instructions for Continued Airworthiness consist of multiple documents, the section required by this paragraph must be included in the principal manual.	A29.4	ATA 4
(Y) The Airworthiness Limitations Section must contain a legible statement in a prominent location indicating that the Airworthiness Limitations Section is FAA/AUTHORITY-approved and specifies required maintenance and/or inspections. The exact, required wording of this statement is found in the FAR/JAR.	A29.4	ATA 4

Figure 2 (continued)

NOTE: The Airworthiness Limitations Section (ALS) is evaluated and approved by FAA/AUTHORITY. The applicant's proposed ICA is submitted to the FAA/AUTHORITY.

/M	ΔΝΙ	ΙΔΙ	IDEN	TIFIC	ATION)
l IVI	\sim 171		IDLIN		AIICIN

THIS PAGE INTENTIONALLY LEFT BLANK